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10/500,109	01/12/2005	Michael Josephus Theresia Van Eijk	VAN EIJK-11	9167

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BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER	
MUMMERT, STEPHANIE KANE	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,109	VAN EIJK ET AL.	
	Examiner	Art Unit	
	Stephanie K. Mummert, Ph.D.	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *28-32 and 35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/25/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed May 11, 2007, amending claims 1-34 and 36-39, canceling claims 28-32 and 35 and withdrawing claims 33-34 and 36-39 is acknowledged and has been entered.

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-27 in the reply filed on April 27, 2007 is acknowledged. The traversal is on the ground(s) that Applicant's disagree that the inventions lack a special technical feature under PCT Article 13.2 and particularly assert that the first broadest product, the oligonucleotide probes, provide a special technical feature over the art. This is not found persuasive because as noted in the previously filed restriction requirement, Wenz (2003/0190646; October 2003) teaches oligonucleotide primers and probes that correspond to primers and probes that would be useful in the practice of the method of claim 1.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 33-34 and 36-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 27, 2007.

Claims 1-27 are pending and will be examined.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on June 25, 2004 was filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

However, it is noted that the references cited without copies provided, "since copies are provided directly by WIPO under an exchange program between the PTO, the EPO, and the JPO" have not actually been provided. Or, if they have been provided by WIPO, these references are not currently represented in the file.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-8 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As currently recited, claim 2 depends from itself and each of the further dependent claims depend from claim 2. As a claim cannot depend from itself, the dependency of claim 2 and the other dependent claims are unclear.

Specification

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. See page 25 of specification.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 61-63 and 66-67 of copending Application No. 10/560968 ('986 application, herein) in view of Schouten et al. (EP1130113; September 5, 2001) and Tang et al. (Nucleic Acids Research, 1995, vol. 23, no. 16, p. 3126-3131). Although the conflicting claims are not identical, they are not patentably distinct.

The instant application is directed to the detection of nucleic acid sequences comprising hybridizing adjacent probes complementary to the target, ligating the adjacent probes and detecting the presence of a ligation product. The probes comprise a tag sequence that is non-complementary to the target, comprises primer-binding sequence, a stuffer sequence of unique

mass and a restriction site. The ligated probes are amplified, digested and the presence is detected based upon mass.

The copending '986 application is directed to a broader genus of the species disclosed in the instant application. In the '986 application, the hybridization of complementary probes comprising a target complementary portion and a target non-complementary portion. The method of '986 also comprises amplifying the ligation products prior to detection.

The copending application does not explicitly state the components of the tag sequence as comprising a primer binding sequence, a stuffer, and restriction site. Schouten teaches a method of target dependent ligation, comprising hybridization of adjacent oligonucleotide probes comprising non-target complementary tags comprising a primer binding sequence and a stuffer (p. 3, paragraph 18, where the tags are used to prime synthesis and where the primer is specific for the tag; see Abstract; p. 4, paragraph 23, where size differences can be generated by introducing a stuffer region that is non-complementary to the target nucleic acid). Schouten does not explicitly teach that the tag includes a restriction site. Tang teaches a method of mass spectroscopic analysis of DNA probes and includes a teaching of the inclusion of restriction sites for cleavage of tags (Abstract, p. 3130, col. 2).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have extended the teachings of Schouten to incorporate the restriction site into the mass spec analysis as taught by Tang to arrive at the claimed invention with a reasonable expectation for success. As taught by Tang, "a restriction site could be positioned such that most of the known primer sequence is cut off prior to mass spectrometry. Thus actual and valuable sequence information could be obtained, even if only short Sanger ladders are produced and

analyzed" (p. 3130, col. 2, 'potential applications in molecular biology' heading). Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to have extended the teachings of Schouten to incorporate the restriction site into the mass spec analysis as taught by Tang to arrive at the claimed invention with a reasonable expectation for success.

This is a provisional obviousness-type double patenting rejection.

Note on Claim Interpretation

For examination purposes, claim 2 is presumed to depend from claim 1. Each of the dependent claims that depend from claim 2 will be treated as depending from original claim 1, through claim 2.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-14 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schouten et al. (EP1130113; September 5, 2001) in view of Tang et al. (Nucleic Acids Research, 1995, vol. 23, no. 16, p. 3126-3131). Schouten teaches a method comprising multiplex ligation and detection assay (Abstract).

With regard to claim 1, Schouten teaches a method for determining the presence or absence of at least one target sequence (2) in a nucleic acid sample, comprising the steps of:

a) providing to a nucleic acid sample a pair of a first oligonucleotide probe and a second oligonucleotide probe for each target sequence to be detected in the sample, whereby the first oligonucleotide probe has a section (4) at its 5'-end that is complementary to a first part (5) of a target sequence and the second oligonucleotide probe has a section (6) at its 3'-end that is complementary to a second part (7) of the target sequence, wherein , the first (5) and second part (7) of the target sequence are located adjacent to each other (Abstract, where a first probe is complementary to a first part of a target and a second probe is complementary to a second part of a target, each adjacent to the other; p. 3, paragraph 15-16), and wherein, the first and second oligonucleotide probes (4, 6) each comprise a tag sequence (8, 9) (Abstract, where the probes comprise a tag that is non-complementary to the target; p. 3, paragraph 13, 18), which tag sequence

i) are essentially non-complementary to the target sequence (Abstract, where the probes comprise a tag that is non-complementary to the target; p. 3, paragraph 13, 18),

ii) comprise primer-binding sites (12,13) (p. 3, paragraph 18, where the tags are used to prime synthesis and where the primer is specific for the tag; see Abstract), and

wherein at least one of the tags further comprises a stuffer (11) (p. 4, paragraph 23, where size differences can be generated by introducing a stuffer region that is non-complementary to the target nucleic acid) and

b) allowing the oligonucleotide probes to anneal to the adjacent parts of target sequence so that the complementary sections (4,6) of the first and the second oligonucleotide probes are adjacent (Abstract, where a first probe is complementary to a first part of a target and a second probe is complementary to a second part of a target, each adjacent to the other; p. 3, paragraph 15-16,

where the adjacent probes are ligated to one another);

c) providing means (14) for connecting the first and the second oligonucleotide probes annealed adjacently to the target sequence and allowing the complementary sections (4, 6) of the adjacently annealed first and second oligonucleotide probes to become connected, to produce a connected probe (15) corresponding to a target sequence in the sample (Abstract, where a first probe is complementary to a first part of a target and a second probe is complementary to a second part of a target, each adjacent to the other; p. 3, paragraph 15-16, where the adjacent probes are ligated to one another);

d) amplifying the connected probes from a primer pair (16, 17) to produce an amplified sample (19) comprising amplified connected probes (20) (Abstract, p. 3, paragraph 15, where connected probes are amplified);

f) detecting the presence or absence of the target sequence by detecting the presence or absence of the detectable fragment by a detection method based upon molecular mass (p. 3, paragraph 19, where the various amplicons are discriminated based on size, or mass; see paragraph 148, where mass spectrometry is used to detect and identify amplification products).

With regard to claim 2, Schouten teaches an embodiment of claim 1, wherein the mass of a detectable fragment corresponding to a target sequence in a sample differs in-mass-from the mass of a detectable fragment corresponding to a different target sequence in the sample (paragraph 148, where mass spectrometry is used to detect and identify amplification products; paragraph 180, where in multiplex assays after template directed ligation, products are discriminated based on length or mass; paragraph 202, where the oligonucleotides for detecting wild type versus mutant sequence differ by at least 4 nucleotides).

With regard to claim 3, Schouten teaches an embodiment of claim 2, wherein the detectable fragment is denatured to provide a top single strand and a bottom single strand (paragraph 207, for example, where denaturation steps are included in the method).

With regard to claim 4, Schouten teaches an embodiment of claim 3, wherein the top strand stranded oligonucleotide comprising comprises the stuffer and wherein the bottom strand is essentially complementary to the top strand (p. 4, paragraph 23, where size differences can be generated by introducing a stuffer region that is non-complementary to the target nucleic acid and wherein the nucleic acid is double stranded and would inherently be complementary regarding top strand and bottom strand).

With regard to claim 5, Schouten teaches an embodiment of claim 3, wherein the mass of a top strand corresponding to one target sequence in a sample differs from the mass of the top strand corresponding to a different target sequence in the sample (paragraph 148, where mass spectrometry is used to detect and identify amplification products; paragraph 180, where in multiplex assays after template directed ligation, products are discriminated based on length or mass; paragraph 202, where the oligonucleotides for detecting wild type versus mutant sequence differ by at least 4 nucleotides).

With regard to claim 6, Schouten teaches an embodiment of claim 3, wherein the mass of a bottom strand corresponding to one target sequence in a sample differs from the mass of the bottom strand corresponding to a different target sequence in the sample (paragraph 148, where mass spectrometry is used to detect and identify amplification products; paragraph 180, where in multiplex assays after template directed ligation, products are discriminated based on length or

mass; paragraph 202, where the oligonucleotides for detecting wild type versus mutant sequence differ by at least 4 nucleotides).

With regard to claim 7, Schouten teaches an embodiment of claim 3, wherein the difference in mass is due to provided by the mass of the stuffer in the top strand (p. 4, paragraph 23, where size differences can be generated by introducing a stuffer region that is non-complementary to the target nucleic acid and wherein the nucleic acid is double stranded and would inherently be complementary regarding top strand and bottom strand).

With regard to claim 9, Schouten teaches an embodiment of claim 1, wherein a primer capable of annealing to the primer-binding site in the detectable fragment comprises an affinity label (paragraph 97, where the primer can comprise a modification such as the inclusion of a biotin label).

With regard to claim 10, Schouten teaches a method according to claim 9, wherein the top strands and/or the bottom strands comprise the affinity label (paragraph 181, lines 45-48, where the target nucleic acid can be tagged with biotin or digoxigenin).

With regard to claim 11, Schouten teaches an embodiment of claim 9, wherein the detectable fragment, the top strand or the bottom strand is purified or separated from the sample comprising the amplified connected probes using the affinity label (paragraph 181, lines 45-48, where the target nucleic acid can be tagged with biotin or digoxigenin and where, before or after hybridization, the tagged target nucleic acid can be separated).

With regard to claim 12, Schouten teaches an embodiment of claim 9, wherein the affinity label is biotin (paragraph 97, where the primer can comprise a modification such as the inclusion of a biotin label).

With regard to claim 13, Schouten teaches an embodiment of claim 1, wherein the detection method is based-on mass spectroscopic method (paragraph 148, where mass spectrometry is used to detect and identify amplification products).

With regard to claim 16, Schouten teaches an embodiment of claim 3, wherein a further mass difference in mass between top strands corresponding to different target sequences is created by incorporating different primer-binding sites in the oligonucleotide probes to which the different primers can anneal (paragraph 13, where the first and second tags may comprise different sequences; paragraph 18, where the tag comprises primer binding sequences).

With regard to claim 17, Schouten teaches an embodiment of claim l, wherein the tag of the oligonucleotide probes comprise said stuffer sequence with a mass from 0 to 20,000 daltons (p. 4, paragraph 23, where size differences can be generated by introducing a stuffer region that is non-complementary to the target nucleic acid).

With regard to claim 18, Schouten teaches an embodiment of claim 1, wherein the presence or absence of at least 10 different target nucleotide sequences is determined in a nucleic acid sample (paragraph 56, where the method can be used to detect 10-100 sites simultaneously).

With regard to claim 19. Schouten teaches an embodiment of claim l, wherein the length of the complementary section of the oligonucleotide probes is between 15 and 50 nucleotides (paragraph 17, where the length of the complementary region is at least 20 nucleotides).

With regard to claim 20, Schouten teaches an embodiment of claim 1, wherein the length of the primer-binding site is between 12 and 40 nucleotides (paragraph 18, where the tag comprising the primer binding site typically is of a length of at least 15 nucleotides, but can be any size).

With regard to claim 21, Schouten teaches an embodiment of claim 1, wherein the length of the tag is between 15 and 540 nucleotides (paragraph 18, where the tag comprising the primer binding site typically is of a length of at least 15 nucleotides, but can be any size).

With regard to claim 22, Schouten teaches an embodiment of claim 1, wherein the target nucleotide sequence contains a polymorphism (paragraph 24, 59, 152, where the target comprises a polymorphism, namely a SNP).

With regard to claim 23, Schouten teaches an embodiment of claim 1, wherein the target nucleotide sequence is a DNA molecule selected from the group consisting of: cDNA, genomic DNA, a restriction fragment, an adapter-ligated restriction fragment, amplified adapter-ligated restriction fragments or AFLP fragments (paragraph 107, where the method can be performed on nucleic acids from all known organisms and all nucleic acid containing cells and the target can comprise DNA or RNA).

With regard to claim 24, Schouten teaches an embodiment of claim 1, further comprising a step for removing non-ligated probes (paragraph 14, where non-hybridized and non-ligated probes are removed prior to further analysis).

Regarding claim 1, Schouten does not teach that the tag sequence comprises a restriction site (10) for a restriction enzyme, or step (A) which restriction site (10) is located between the primer-binding site and the section of the oligonucleotide probe (4, 6) that is complementary to the first (5) or second part (7) of the target sequence. Schouten also does not teach step e) digesting the amplified connected probes with the restriction enzyme to produce a detectable fragment (21). Tang teaches a method of mass spectroscopic analysis of DNA probes and

includes a teaching of the inclusion of restriction sites for cleavage of tags (Abstract, p. 3130, col. 2).

With regard to claim 1, Tang in view of Schouten teaches a method comprising sequence comprises a restriction site (10) for a restriction enzyme, and also teaches (A) which restriction site (10) is located between the primer-binding site and the section of the oligonucleotide probe (4, 6) that is complementary to the first (5) or second part (7) of the target sequence (where first it is noted that Schouten teaches the format of the tag sequence, comprising a primer binding site; Tang teaches that restriction sites could be positioned next to the primer site and most of the primer site is cut off prior to mass spectrometry; see p. 3130, col. 2, 'potential applications in molecular biology' heading); and

e) digesting the amplified connected probes with the restriction enzyme to produce a detectable fragment (21) (p. 3130, col. 2, 'potential applications in molecular biology, where Tang teaches that restriction sites could be positioned next to the primer site where most of the primer site is cut off prior to mass spectrometric analysis).

With regard to claim 8, Tang in view of Schouten teaches an embodiment of claim 3, wherein the top strands and/or the bottom strands corresponding to different target sequences in the sample differ in mass by more than 1 Dalton (see Figure 2 and 3, where the difference in masses between different targets is more than 1 Dalton).

With regard to claim 14, Tang in view of Schouten teaches an embodiment of claim 1, wherein the restriction enzyme is a restriction endonuclease (p. 3130, col. 2, 'potential applications in molecular biology' heading, where Tang teaches that restriction sites could be

positioned next to the primer site where most of the primer site is cut off prior to mass spectrometric analysis).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have extended the teachings of Schouten to incorporate the restriction site into the mass spec analysis as taught by Tang to arrive at the claimed invention with a reasonable expectation for success. As taught by Tang, "a restriction site could be positioned such that most of the known primer sequence is cut off prior to mass spectrometry. Thus actual and valuable sequence information could be obtained, even if only short Sanger ladders are produced and analyzed" (p. 3130, col. 2, 'potential applications in molecular biology' heading). Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to have extended the teachings of Schouten to incorporate the restriction site into the mass spec analysis as taught by Tang to arrive at the claimed invention with a reasonable expectation for success.

11. Claims 15 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schouten et al. (EP1130113; September 5, 2001) in view of Tang et al. (Nucleic Acids Research, 1995, vol. 23, no. 16, p. 3126-3131) as applied to claims 1-14 and 16-24 above and further in view of Vos et al. (Nucleic Acids Research, 1995, vol. 23, p. 4407-44014). Schouten teaches a method comprising multiplex ligation and detection assay (Abstract).

Schouten in view of Tang teach the limitations of claims 1-24. Neither Schouten or Tang teach the inclusion of a selective primer during the amplification step. Vos teaches a method of selective amplification of restriction fragments (Abstract).

With regard to claim 15, Vos teaches an embodiment of claim 14, wherein the restriction endonuclease is a rare cutter (p. 4409, 'principle of the method' heading, where the fragments for amplification are generated by a rare cutter at one end and a frequent cutter at the other end).

With regard to claim 25, Vos teaches an embodiment of claim 1, wherein at least one of the primers is a selective primer (p. 4408, col. 1, 'AFLP primers and adapters' heading, where AFLP primers consist of three parts, including a selective extension; p. 4409, col. 1, where selective nucleotides are included at the 3' end of PCR primers, only restriction fragments where the nucleotides flanking the site match the selective nucleotides will be amplified).

With regard to claim 26, Vos teaches an embodiment of claim 25, wherein the selective primer comprises:

i) a section that is complementary to at least part of the primer-binding site (p. 4408, col. 1, where the primers are complementary to the primer binding site and comprise additional sequences), and

ii) a selective section of one to 10 selective nucleotides, located immediately adjacent, to the 3' end of the section of (i) (p. 4408, col. 1, 'AFLP primers and adapters' heading, where AFLP primers consist of three parts, including a selective extension; p. 4409, col. 1, where selective nucleotides are included at the 3' end of PCR primers, only restriction fragments where the nucleotides flanking the site match the selective nucleotides will be amplified).

With regard to claim 27, Vos teaches an embodiment of claim 26 wherein the section of (i) is complementary to 5 or more nucleotides that form a part of the primer-binding that is located immediately adjacent to the nucleotides complementary to the selective section of the primer (p. 4408, col. 1, 'AFLP primers and adapters' heading, where AFLP primers consist of

three parts, including a selective extension; p. 4409, col. 1, where selective nucleotides are included at the 3' end of PCR primers, only restriction fragments where the nucleotides flanking the site match the selective nucleotides will be amplified).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have extended the method of Schouten and Tang to incorporate the selective primer of Vos to arrive at the claimed invention with a reasonable expectation for success. As taught by Vos, "selective amplification is achieved by the use of primers that extend into the restriction fragments, amplifying only those fragments in which the primer extensions match the nucleotides flanking the restriction sites" and "allows the specific co-amplification of high numbers of restriction fragments" (Abstract). Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to have extended the method of Schouten and Tang to incorporate the selective primer of Vos to arrive at the claimed invention with a reasonable expectation for success.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie K. Mummert, Ph.D. whose telephone number is 571-272-8503. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stephanie K. Mummert

Stephanie K Mummert, Ph.D.
Examiner
Art Unit 1637

SKM

GARY BENZION, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600